FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | | | | | | | |
|--------------------------|-----------|--|--|--|--|--|--|
| OMB Number: | 3235-0287 | | | | | | |
| Estimated average burden | | | | | | | |
| hours per response: | 0.5 | | | | | | |

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| Name and Address of Reporting Person* Waltzman Roger J. | | | | | 2. Issuer Name and Ticker or Trading Symbol Molecular Templates, Inc. [MTEM] | | | | | | | | | tionship of R all applicabl Director | | erson(s | s) to Issuer 10% Ow | ner |
|---|--|--|--|-------------------------------|--|--|--|--|-----|---|-----------------|---|---|--|------------|--|--|--------|
| (Last) | (First) |) (1 | Middle) | | 3. Date of Earliest Transaction (Month/Day/Year) 02/15/2023 | | | | | | | | X | Officer (gi below) | | | Other (s below) | pecify |
| C/O MOLECULAR TEMPLATES, INC. | | | | | | | | | | | | | | | See re | mark | S | |
| 9301 AMBERGLEN BLVD., SUITE 100 | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person | | | | | | |
| (Street) AUSTIN TX 78729 | | | | | | | | | | | | , A | Form filed by More than One Reporting Person | | | | | |
| (City) | (State | e) (2 | Zip) | | | | | | | | | | | | | | | |
| | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | | |
| Date | | | | 2. Transa Date (Month/D | | 2A. Deemed Execution Date, if any (Month/Day/Year) | | Transaction Dispose Code (Instr. | | rities Acquired (A) or ed Of (D) (Instr. 3, 4 and | | | 5. Amount of Securities Beneficially Following F | Owned Reported | Form: | rect (I) 4) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | Code | v | Amount (A) or (D) | | Price | | Transaction(s) (Instr. 3 and 4) | | | (Instr. 4) | |
| | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | | | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year | Code | saction e (Instr. | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Ins 3 and 4) | | lying | 8. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficial Owned Following Reported Transaction | illy | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
| | | | | Code | e V | (A) | | Date Exercisabl | | piration ite | Title | N | mount or umber of hares | | (Instr. 4) | J.11(3) | | |
| Stock Option (right to buy) | \$0.4812 | 02/15/2023 | | A | | 170,000 | | (1) | 02/ | /14/2033 | Common Stock | 1 | 70,000 | \$0.00 | 170,00 | 0 | D | |

Explanation of Responses:

1. 25% of the shares subject to the option shall vest on February 15, 2024, and thereafter, the remaining 75% of the shares subject to the option shall vest pro rata on a monthly basis over the following 36 months.

Remarks:

Chief Medical Officer

/s/ Roger J. Walztman

02/17/2023

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

 $^{^{\}star}$ If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

^{**} Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).